

**ABSTRACT****COMPOSITIONS AND METHODS FOR INDUCTION OF PROTEINS INVOLVED IN XENOBIOTIC METABOLISM**

The present invention provides improved cells and methods for identifying compounds that alter protein expression, such as xenobiotics, endobiotics, chemicals or drugs. The invention provides other benefits as well. One aspect of the present invention is a cell that includes a first nucleic acid molecule that includes: a promoter or enhancer operable for a nucleic acid molecule encoding a human or non-human protein involved in drug metabolism (such as an enzyme or transporter) and a reporter gene; and a second nucleic acid encoding a human or non-human intracellular receptor or transcription factor; so that when the intracellular receptor or transcription factor is bound with a compound, the intracellular receptor, transporter or transcription factor can operably bind with the promoter or enhancer resulting in the expression of said reporter gene. Another aspect of the present invention is a method for evaluating compounds for the property of inducing the expression of a gene encoding a protein involved in drug metabolism, including; providing a test compound; contacting the test compound with a cell of the present invention; and detecting the expression of said reporter gene. This method can be a high throughput method.